

### ABSTRACT OF THE DISCLOSURE

A voltage regulator has a reference voltage circuit, a voltage source, an output terminal from which an output voltage is outputted in accordance with a voltage of the voltage source, and a voltage dividing circuit for dividing the output voltage of the output terminal. An error amplifier outputs a signal in accordance with an output of the voltage dividing circuit and an output of the reference voltage circuit. An output transistor is connected between the voltage source and the voltage dividing circuit and is ON/OFF-controlled in accordance with the signal outputted from the error amplifier. A current adding circuit controls an operating current of the error amplifier in accordance with the output voltage of the output terminal and the voltage of the voltage source by increasing the operating current of the error amplifier when the output voltage of the output terminal is higher than a predetermined value.